

IN THE CLAIMS:

Please CANCEL claims 1-40 without prejudice to or disclaimer of the recited subject matter.

Please ADD new claims 41-69, as follows. For the Examiner's convenience, all claims currently pending in this application have been reproduced below:

1 - 40. (Cancelled)

41. (New) An exposure apparatus comprising:

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a projection optical system for projecting a pattern, which has been formed on a reticle, onto a photosensitive substrate, wherein a projection region of the pattern, which region is formed on the substrate via said projection optical system, is formed at a position that is off-centered with respect to an optical axis of said projection optical system;

a substrate stage capable of holding and moving the substrate;

a substrate transport system for transporting the substrate to said substrate stage, wherein said substrate transport system is disposed on the side of the projection region with respect to the optical axis, and said substrate transport system and said substrate stage are arranged in a divided space which is purged with inert gas; and

a position detection system for detecting an alignment mark on the substrate.

42. (New) The apparatus according to claim 41, wherein said position detection system is disposed between said substrate transport system and said projection optical system.

43. (New) The apparatus according to claim 41, wherein said projection optical system forms an intermediate image within said projection optical system.

44. (New) The apparatus according to claim 41, wherein said projection optical system is a reflection projection optical system.

45. (New) The apparatus according to claim 41, wherein said projection optical system is a reflection-refraction optical system.

46. (New) The apparatus according to claim 41, wherein said exposure apparatus is a scanning-type exposure apparatus.

47. (New) A method of manufacturing a device by using the exposure apparatus set forth in claim 41.

48. (New) A method of manufacturing a semiconductor device, comprising the steps of:

placing a group of manufacturing equipment for performing various processes, inclusive of the exposure apparatus set forth in claim 41, in a plant for manufacturing semiconductor devices; and

manufacturing a semiconductor device by performing a plurality of processes using this group of manufacturing equipment.

49. (New) The method according to claim 48, further comprising the steps of:

interconnecting the group of manufacturing equipment by a local-area network;

and

communicating, by data communication, information relating to at least the exposure apparatus in the group of manufacturing equipment between the local-area network and an external network outside the plant.

50. (New) The method according to claim 49, further comprising performing one of (i) obtaining maintenance information for the manufacturing equipment by accessing, by data communication via the external network, a database provided by a vendor or user of the exposure apparatus, and (ii) performing production management by data communication with a semiconductor manufacturing plant other than said first-mentioned semiconductor manufacturing plant via the external network.

51. (New) A semiconductor manufacturing plant, comprising:

a group of manufacturing equipment for performing various processes, inclusive of an exposure apparatus set forth in claim 41;

a local-area network for interconnecting the group of manufacturing equipment;

and

a gateway for making it possible to access, from said local-area network, an external network outside the plant,

whereby information relating to at least one of the pieces of manufacturing equipment can be communicated by data communication.

52. (New) A method of maintaining an exposure apparatus, which is set forth in claim 41, installed in a semiconductor manufacturing plant, said method comprising the steps of:

providing a maintenance database, which is connected to an external network of the semiconductor manufacturing plant, by a vendor or user of the exposure apparatus;

allowing access to the maintenance database from within the semiconductor manufacturing plant via the external network; and

transmitting maintenance information, which is stored in the maintenance database, to the side of the semiconductor manufacturing plant via the external network.

53. (New) The exposure apparatus according to claim 41, further comprising:

- a display;
- a network interface; and
- a computer for running network software,

wherein maintenance information relating to said exposure apparatus is communicated by data communication via a computer network.

54. (New) The apparatus according to claim 53, wherein the network software provides said display with a user interface for accessing a maintenance database, which is connected to an external network of a plant at which said exposure apparatus has been installed, and which is provided by a vendor or user of the exposure apparatus, thereby obtaining information from said database via said external network.

55. (New) The apparatus according to claim 41, wherein said apparatus comprises a plurality of position detection systems for detecting an alignment mark on the substrate, and said plurality of position detection systems are disposed on the side of said projection region with respect to the optical axis.

56. (New) The apparatus according to claim 55, wherein said plurality of position detection systems are each disposed along mutually perpendicular X and Y directions passing

through the optical axis, or substantially the optical axis of the projection region and lying parallel to the surface of the substrate.

57. (New) The apparatus according to claim 56, wherein a position of the alignment mark along the Y direction is detected by the position detection system disposed along the X direction and a position of the alignment mark along the X direction is detected by the position detection system disposed along the Y direction.

58. (New) An exposure apparatus comprising:

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a projection optical system for projecting a mask pattern onto a photosensitive substrate, wherein a projection region of the pattern, which region is formed on the substrate via said projection optical system is formed at a position that is off-centered with respect to an optical axis of said projection optical system and an illumination region on the mask is formed at a position that is off-centered with respect to the optical axis of said projection optical system;

a mask stage capable of holding and moving the mask; and

a mask transport system for transporting the mask to said mask stage, wherein said mask transport system is disposed on the side of the illumination region with respect to the optical axis, and said mask stage and said mask transport system are arranged in a divided space which is purged with inert gas.

59. (New) The apparatus according to claim 58, wherein said projection optical system forms an intermediate image within said projection optical system.

60. (New) The apparatus according to claim 58, wherein said projection optical system is a reflection projection optical system.

61. (New) The apparatus according to claim 58, wherein said projection optical system is a reflection-refraction optical system.

62. (New) The apparatus according to claim 58, wherein said exposure apparatus is a scanning-type exposure apparatus.

63. (New) An exposure apparatus comprising:

a projection optical system for projecting a mask pattern onto a photosensitive substrate, wherein a projection region of the pattern, which region is formed on the substrate via said projection optical system, and an illumination region on the mask are formed at positions that are off-centered to the same side with respect to the optical axis of said projection optical system;

a mask stage capable of holding and moving the mask;

a mask transport system for transporting the mask to said mask stage;

a substrate stage capable of holding and moving the substrate;

a substrate transport system for transporting the substrate to said substrate stage, wherein said mask transport system and said substrate transport system are disposed on the side of the projection optical region and illumination region with respect to the optical axis; and

a position detection system for detecting an alignment mark on the substrate, wherein a system including at least one of (i) a mask stage and said mask transport system and (ii) said substrate transport system and said substrate stage is arranged in a divided space which is purged with inert gas.

64. (New) The apparatus according to claim 63, wherein said projection optical system forms an intermediate image within said projection optical system.

65. (New) The apparatus according to claim 63, wherein said position detection system is disposed on the side of the projection region and illumination region with respect to the projection center.

66. (New) The apparatus according to claim 63, further comprising a mask position detection system for positioning the mask,

wherein said mask position detection system is disposed on the side of the projection region and illumination region with respect to the projection center.



67. (New) The apparatus according to claim 63, wherein said projection optical system is a reflection projection optical system.

68. (New) The apparatus according to claim 63, wherein said projection optical system is a reflection-refraction optical system.

69. (New) The apparatus according to claim 63, wherein said exposure apparatus is a scanning-type exposure apparatus.